

### **REMARKS/ARGUMENTS**

Independent claim 1 has been amended to clarify that the polymer fibers are melt spun polymer fibers that have been stretched and directly laid such that the overlap of the cross sections of the fibers is greater than fleeces with fibers of circular cross sections at the same. New claim 23, dependent upon claim 1, recites that the spunbond fleece is hardened by thermal bonding. New claim 24, dependent upon claim 1, recites that all of the melt spun polymer fibers have a non-circular cross section with a trilobal, multilobal, flat, oval, Z-form, S-form or keyhole form fiber cross section. Support for these claim amendments and new claims can be found throughout the present specification including paragraphs [0020] and [0060] – [0063] of the published application (i.e., U.S. Publication No. 2008/0032579).

As such, no new matter has been entered.

#### **I. Anticipation Rejections**

Claims 1, 3, 6, 9, 16, and 20 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,868,031 to Modrak et al. (“Modrak”) as evidenced by U.S. Patent No. 3,186,155 to Lauterbach et al. (“Lauterbach”). Applicants traverse this rejection.

To establish an anticipation, a prior art reference must disclose the invention as set forth in the claim. Specifically, “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” M.P.E.P. §2131 citing *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). As also set forth in M.P.E.P. §2131, “The identical invention must be shown in as complete detail as is contained in the ...claim.” See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants submit that Modrak (alone or as evidenced by Lauterbach) does not teach or suggest a spunbond fleece of melt spun polymer fibers being stretched and having a non-circular cross section with a trilobal, multilobal, flat, oval, Z-form, S-form or keyhole form fiber cross section, in which the melt spun polymer fibers have preferred directions in the spunbond fleece and are spun and directly laid in a preferred direction perpendicular to the Z-direction and in the

machine direction and/or transverse to the machine direction section such that the overlap of the cross sections of the fibers is greater than fleeces with fibers of circular cross sections at the same titer. In fact, Modrak is silent regarding this particular aspect of the currently claimed invention.

Applicants note that Modrak is generally directed to **carded nonwovens formed from pre-spun staple fibers** to provide an increased opacity. For instance, Modrak teaches that the filament or fiber mix in webs used to form nonwovens varies from 1-3 inches in length. See column 3, lines 17-20. Modrak teaches the use of carded nonwovens utilizing staple fibers of delta and/or diamond cross-sectional configurations. See Examples 1 and 2 of Modrak. Modrak teaches that the carded nonwoven should contain at least about 25% polyolefin filament of delta and/or diamond cross-sectional configurations, based on the total web weight of the nonwoven material. See column 2, lines 27-30. To balance softness and toughness, Modrak teaches the utilization of a ratio of delta and/or diamond-to-round cross-sectional configuration of about (25%-75%)-to-(75%-25%) and preferably about 50%-to-50% based on individual web weight or on total web weight.

As well known in the art, "carding" is a process in which staple fibers are sorted, separated, and partially aligned. Also well known in the art, "staple fibers" are short fibers measured in inches or fractions of inches, as opposed to meters or yards. As noted above, Modrak teaches the use of staple fibers to produce carded nonwovens. For instance, Example 3 describes the production of polyethylene filaments having diamond, delta, and round cross-sectional configurations. These filaments are "cut to one inch (1") length, baled, and stored for later use." See column 7, lines 1-2. Example 4 describes the creation of carded nonwoven test strips using the staple fibers described in Example 3. In particular, Modrak discloses producing carded nonwovens varying in weight of about 10-15 gm/yd<sup>2</sup> from the staple fibers of Example 3.

Accordingly, Modrak clearly does not teach a spunbond fleece of melt spun polymer fibers directly laid such that the overlap of the cross sections of the fibers is greater than fleeces with fibers of circular cross sections at the same titer. To the contrary, Modrak teaches a carding process in which staple fibers are utilized for the preparation of a carded nonwoven.

The Office appears to rely on Lauterbach for apparently showing that Modrak's use of diamond or delta cross-sectional fibers would result in a greater reduction in light permeability due to the bulky nature of such fibers. Applicants note, however, that Lauterbach suffers from the same noted deficiency of Modrak.

Modrak (alone or as evidenced by Lauterbach), however fails to teach or suggest a spunbond fleece of melt spun polymer fibers having a non-circular cross section as recited in which the melt spun polymer fibers have preferred directions in the spunbond fleece and are spun and directly laid in a preferred direction perpendicular to the Z-direction and in the machine direction and/or transverse to the machine direction section such that the overlap of the cross sections of the fibers is greater than fleeces with fibers of circular cross sections at the same titer.

For at least this reason, Applicants submit that Modrak (alone or as evidenced by Lauterbach) does not anticipate any of the currently pending claims. As such Applicants request the withdrawal of this rejection.

## **II. Obviousness Rejections**

The Office has asserted the following obviousness rejections:

- (a) claims 5, 7, 8, and 19 stand rejected under 35 U.S.C. §103(a) as being obvious over Modrak as evidenced by Lauterbach;
- (b) claims 10-13 and 17-18 stand rejected under 35 U.S.C. §103(a) as being obvious over Modrak as evidenced by Lauterbach in view of U.S. Patent No. 5,560,974 to Langley ("Langley");
- (c) claims 14, 21, and 22 stand rejected under 35 U.S.C. §103(a) as being obvious over Modrak as evidenced by Lauterbach in view of U.S. Patent No. 6,797,377 to Delucia et al. ("Delucia"); and
- (d) claim 15 stands rejected under 35 U.S.C. §103(a) as being obvious over Modrak as evidenced by Lauterbach in view of Langley and further in view of Delucia.

### **Applicants traverse all obviousness rejections.**

To establish a *prima facie* case of obviousness, according to a test predominately used by the courts, three basic criteria must be met. First, there must be some suggestion or motivation,

either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim elements. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

With regard to the Supreme Court's decision in *KSR Int'l. Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007), it is noted that the Court did not dismiss the usefulness the well-established "teaching, suggestion, or motivation" test set forth above, but merely cautioned against its rigid application. The Supreme Court in *KSR* commented that the Federal Circuit "no doubt has applied the test in accord with these principles [set forth in *KSR*] in many cases." *Id.* 82 USPQ2d at 1396. However, the Supreme Court also opined that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. . ." *Id.* 82 USPQ2d at 1395-96. Regardless of the precise test used, the Court, quoting *In re Kahn*, cautioned that " '[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *Id.* 82 USPQ2d at 1396.

Applicant notes that Modrak and Lauterbach have been discussed above. To reiterate, the combination of Modrak and Lauterbach is silent regarding a spunbond fleece of melt spun polymer fibers being stretched and having a non-circular cross section with a trilobal, multilobal, flat, oval, Z-form, S-form or keyhole form fiber cross section, in which the melt spun polymer fibers have preferred directions in the spunbond fleece and are spun and directly laid in a preferred direction perpendicular to the Z-direction and in the machine direction and/or transverse to the machine direction section such that the overlap of the cross sections of the fibers is greater than fleeces with fibers of circular cross sections at the same titer. As such, any combination of Modrak and Lauterbach does not teach, suggest, or otherwise render predictable this aspect of the currently claimed invention.

The Examiner cites Langley for teaching a fleece coated with an adhesive as recited in

dependent claims 10-13 and Delucia for illustrating that the use of one of more inorganic salts such as titanium dioxide was known in the art at the time of the present invention.

Langley is directed to non-woven composite fabrics that provide a barrier to the passage of biological liquids, while maintaining a particular vapor transmission rate. Langley teaches that the composite fabrics are constructed of a microporous thermoplastic film having at least one surface thermally bonded to a non-woven layer. As such, the composite fabric of Langley requires (1) a microporous thermoplastic film and (2) a non-woven layer.

Delucia is directed to nonwovens having improved cloth-like properties. Delucia teaches the use of a thermoplastic polymer containing titanium dioxide and other additives to form fibers for the preparation of nonwovens.

Applicants note, however, that Langley and Deluci (alone or in combination) fail to cure the noted deficiencies of the Modrak-Lauterbach combination. That is, any combination of Modrak, Lauterbach, Langley, and Delucia does not teach, suggest, or otherwise render predictable a spunbond fleece of melt spun polymer fibers being stretched and having a non-circular cross section with a trilobal, multilobal, flat, oval, Z-form, S-form or keyhole form fiber cross section, in which the melt spun polymer fibers have preferred directions in the spunbond fleece and are spun and directly laid in a preferred direction perpendicular to the Z-direction and in the machine direction and/or transverse to the machine direction section such that the overlap of the cross sections of the fibers is greater than fleeces with fibers of circular cross sections at the same titer. Accordingly, any combination of the cited art does not render any of the currently pending claims obvious.

For at least these reasons, Applicants submit that all obviousness rejections have been overcome and request the withdrawal of all obviousness rejections.

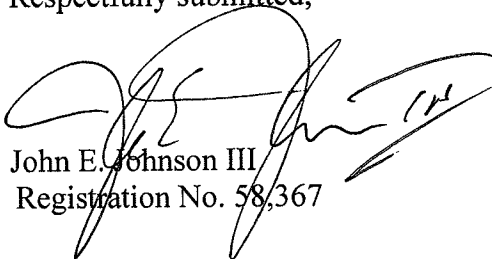
### **III. Conclusion**

In view of at least the claim amendments and remarks made above, Applicant submits that the pending claims are now in condition for allowance. Applicant respectfully requests that the claims be allowed to issue. If the Examiner wishes to discuss the application or the comments herein, the Examiner is urged to contact the undersigned by telephone.

Appl. No.: 10/599,721  
Amdt. dated August 9, 2011  
Reply to Office Action of 03/09/2011

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



John E. Johnson III  
Registration No. 58,367

**Customer No. 00826**  
**ALSTON & BIRD LLP**  
Bank of America Plaza  
101 South Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Tel Charlotte Office (704) 444-1000  
Fax Charlotte Office (704) 444-1111

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON August 9, 2011